Series 185 Frequently Asked Questions

Service 3

How will I know if the controller is non-operational? 3

What should I do if the indicator lights are faulty? 3

How do I contact a service technician? 3

Why won't the engine exerciser light blink after setting (press and hold the button) the exerciser? 3

Why doesn't the engine exerciser light blink to indicate the remaining number of days until the next exercise period? 3

Why won't the generator shut down? 4

Why doesn't the ATS transfer to emergency? 4

Why won't the engine start contacts work? 4

Why does the generator crank up when load is connected to the utility and then shuts down when utility fails? 4

Why won't the utility acceptable LED light up? 4

Wiring 5

Where do I connect the engine start wires? 5

What generators are compatible with the series 185-transfer switch? 5

Is the switch supplied with current limiting fuses? 5

What is the DC voltage on the controller? 5

Features 6

Are the time delays adjustable? 6

How do I specify the ATS? 6

What is the 14A and 14B feature for? 7

What auxiliary features does the ATS offer? 7

Operation 8

How do I set the engine exerciser? 8

How does the ATS work? 8

How can I exercise with load? 9

Why does the generator automatically shut-off? 9

How do I perform a transfer test? 9
How does the engine exerciser work? 9
What does the engine exerciser light indicate? 9
Will the 185-switch work with a non-generator emergency source? 9
Product Installation 10
How do I install the ATS? 10
Where is the ground bus located? 11
Where do I connect the power cables? 11
Others 12
Parts Inquiry 12
Pricing Inquiry 12

Service

How will I know if the controller is non-operational?

1. The indicator lights are not showing proper indications.
2. The switch transfers even if there is no loss of utility power and no transfer test operation or exercise with transfer is confirmed.
3. The relays are not operating according to the normal sequence (no voltage from the board socket to supply the relay coils).
4. The engine exerciser has malfunctioned even if the battery is new, or exercises at a random schedule, or does not function.
5. The generator would not start even when a start signal is verified or does not shut down.
6. The command buttons, DIP switches or potentiometers are non operational.
7. Discoloration or indication of damaged components visible on the circuit board.
8. Remote control switches are not functioning even though proper values have been set.
9. No power present at inputs from the harness.

Consult technical support group to verify the conditions

What should I do if the indicator lights are not functioning properly?

1. Check to determine if correct voltage is applied across the main contacts. This requires opening the enclosure door and wearing the appropriate PPE.
2. Check that voltage sensing wires have continuity.
3. If the voltage across the terminals is acceptable, but the lights are not operational, then the controller should be replaced.

Note: Checking these items requires an ASCO Services technician or a licensed electrician!

How do I contact a service technician?

1. You can contact a local ASI representative by calling the toll free hotline at (1-800-2726) and then go to option 2, then option 3 on the prompt.
2. Customer service assistants can also transfer you to a technician's office in your area.

Why won't the engine exerciser light blink after setting (press and hold the button) the exerciser?

1. Check engine start contacts to confirm they change position. If it doesn't, controller may be non-conforming, replace controller
2. If start contacts change position, generator may have a problem. Contact local generator distributor.
3. Check the 9-volt battery and the S2 dipswitch setting of the battery. It should be ON.

Note: Checking these items requires an ASCO Services technician or a licensed electrician!

Why doesn't the engine exerciser light blink to indicate the remaining number of days until the next exercise period?

1. After the exercise period stops, the flashing light will remain on to indicate that the exercise is enabled and another exercise will be conducted after a week.

Why won't the generator shut down?

1. Generator is still running on cool-down state. Approximately 5 minutes.
2. If the ATS has transferred to the utility source and the generator is still running after 5 minutes, check if generator has its own cool-down timer/setting. Contact local generator supplier
3. If the generator has no cool-down timer but is still running after 5 minutes, check the engine start contacts on the transfer switch.
4. If there is continuity on the N.O. contacts (no continuity on the N.C. contacts) and switch is connected to the utility source, the controller may be non-conforming. Controller should be replaced.

Note: Checking these items requires an ASCO Services technician or a licensed electrician!

Why doesn't the ATS transfer to emergency?

1. Verify that the generator accepted light is on. The ATS will not transfer load to an unacceptable source. Check generator breaker. Contact local generator supplier.
2. Voltage across the emergency terminals is not acceptable.
3. The generator frequency is too low or too high.
4. The solenoid operator is non-operational.
5. The controller is non-operational.

Note: Checking these items requires an ASCO Services technician or a licensed electrician!

Why won't the engine start contacts work?

Conduct a "transfer test." The engine start contacts should change position. If they don't, controller may need to be replaced**.**

Contact an ASCO Services technician or a licensed electrician!

Why does the generator crank up when load is connected to the utility and then shuts down when utility fails?

1. Controller does not sense the proper outage of the normal / utility source. May need to be replaced.

Why won't the utility acceptable LED light up?

1. Normal/utility source is not acceptable. Voltage and/or frequency are not within acceptable parameters.
2. Utility breaker is OFF. Turn the breaker ON.
3. LED has malfunctioned; contact Parts Department or local distributor and replace LED.
   Verify if the transfer switch harness is connected properly to the controller.

Note: Checking this item requires an ASCO Services technician or a licensed electrician!

Wiring

Where do I connect the engine start wires?

The generator starting contact connections are on the controller terminal block. Connect the generator start wires to terminal block TB7 (TB7-4 and TB7-5 for normally open contacts, and TB7-5 and TB7-6 for normally closed contacts)

Caution: Make sure both normal and standby source breakers are in the off position.

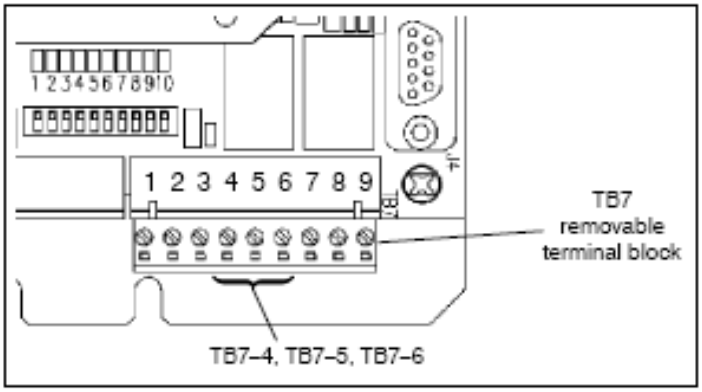


Figure 4. TB7 generator starting contact terminals.

Table A. Generator Start Connections

When the Utility fails	Terminals on Controller
contact closes	TB7–4 and TB7–5
contact opens	TB7–5 and TB7–6

What generators are compatible with the series 185-transfer switch?

The Generator must be a 2 wire start and connect to the engine start circuit of the transfer switch.

Is the switch supplied with current limiting fuses?

No, suggested fuse ratings listed in table below:

Switch Rating (Amps)	When Using Current Limiting Fuses	When Used with Circuit Breakers
100	200kA	10kA
200	200kA	10kA
230	100kA	10kA
260	200kA	35kA
400	200kA	35kA

NOTE: When properly coordinated with current-limiting devices, automatic transfer switches can be used on circuits having available short-circuit currents greater than their unprotected withstand short-circuit current rating. Modern current limiting fuses, when properly sized, limit the short-circuit current to within the withstand rating of a transfer switch.

What is the DC voltage on the controller?

24VDC.

Features

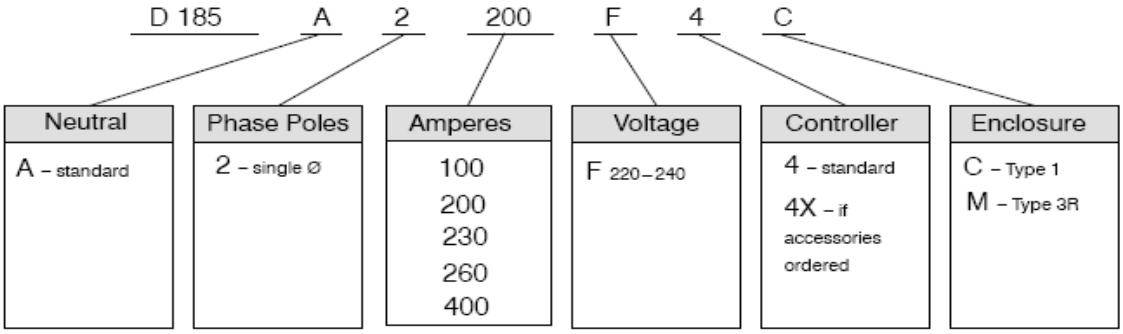
Are the time delays adjustable?

Refer to table for time delay settings.

Time Delay Description	Factory Setting	Settings	DIP Switch	DIP Actuator	Actuator Position
override momentary utility outages	3 seconds	1 second	S2	1	on (up)
		3 seconds	S2	1	off (down)
transfer to generator	10 seconds (approx.)	–	–	–	–
override momentary generator outages	4 seconds	4 second	S3	9	on (up)
		0	S3	9	off (down)
transfer to utility	5 minutes (approx.)	–	–	–	–
unloaded running (generator cooldown)	2 minutes	2 minutes	S1	10	on (up)
		5 minutes	S1	10	off (down)

How do I specify the ATS?

To specify the switch, just follow the Catalog number format below.



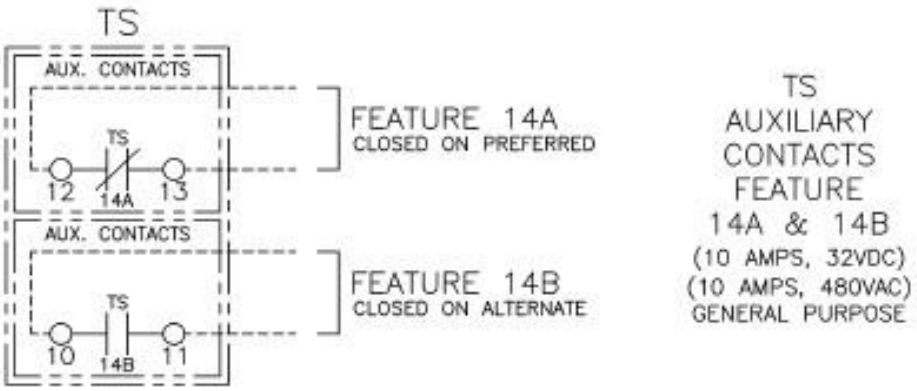
For Service Entrance

Product	Neutral Code	Phase Poles	Amperes Continuous Rating	Voltage Code		Controller	Enclosure	
1AUS*	A - Solid Neutral	2 pole 1ø	200	F	240	4	C	Type 1 (Standard)
			400				M	Type 3R Secured

* Use product code 1APS to specify an optional additional circuit breaker on the emergency source.

What is the 14A and 14B feature for?

Transfer switch auxiliary position indicating contacts. One set of contacts to indicate the connection of the transfer switch to the preferred (utility) source (14A) and one for the alternate (generator) source (14B).



What auxiliary features does the ATS offer?

K373314 Auxiliary Switch Position Contact Kit 14A/14B, 100 through 230A only

Operation

How do I set the engine exerciser?

To set the exerciser:

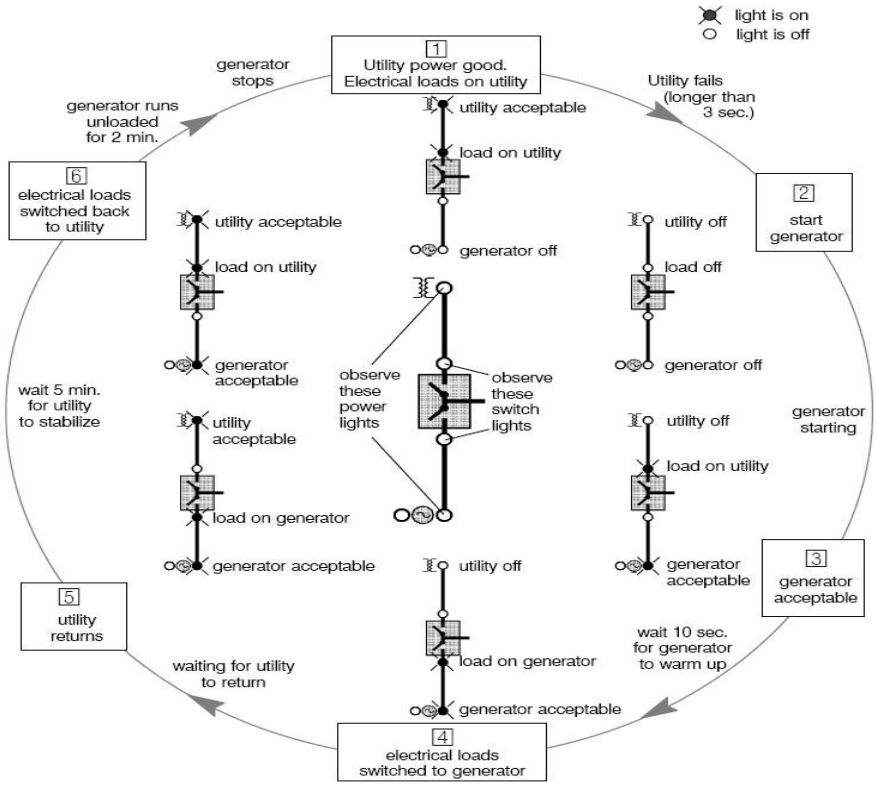
1. Press and hold (5secs) the set Engine Exerciser button
2. The exercise period occurs immediately and at the same time weekly thereafter.
3. The status light below the button blinks rapidly to indicate that the exerciser has been set.
4. The number of flashes indicates the number of days until the next exercise periods (at approximately the same time the button was pressed).

To cancel an active exercise period

1. Press the set engine exerciser button to stop an exercising generator. If exercise with load is set, the ATS retransfers the load to the utility, then stops the generator after cool down

How does the ATS work?

See below ATS sequence of operation



How can I exercise with load?

1. Be sure the exerciser is turned on, and then select either exercise with or without load. Refer to the table for the settings.

   Caution: Make sure both normal and standby source breakers are in the off position before opening the enclosure door to adjust any settings on the controller.

Function	Factory Setting	DIP Switch	DIP Actuator	Actuator Position
clock battery	off	S2	10	on (up) off (down)
exerciser	off	S1	7	on (up) off (down)
with load or without load	without load	S1	8	with (up) without (down)

Why does the generator automatically shut-off?

1. Verify proper generator operation; it may have run out of fuel or shut down due to low oil pressure.
2. Generator may be overloaded. Check if generator circuit breaker tripped. Check sum of load to be sure it does not exceed the capacity of the generator.
3. Check the engine starting contacts.

Note: Checking these items requires an ASCO Services technician or a licensed electrician!

How do I perform a transfer test?

1. To perform a test, press and hold the transfer test button for at least 15 seconds or until the generator cranks.
2. Wait for approximately 10 seconds for the transfer to generator time delay.
3. Press the Bypass Time Delay button for immediate load transfer to the generator.

How does the engine exerciser work?

1. The engine exerciser works by closing the engine start contacts and keeps it closed in order to crank and run the generator for approximately 20 minutes; after time expires, the controller signals the engine start contacts to open up and shut the generator down (after the 5 minute engine cool down period).

What does the engine exerciser light indicate?

1. The status light below the set engine exerciser button blinks rapidly to indicate that the exerciser has been set. The number of flashes indicates the number of days until the next exercise period (at approximately the same time the button was pressed

Will the 185-switch work with a non-generator emergency source?

1. YES, it will work with a non-generator emergency source. As long as you have provided the necessary power cables to the transfer switch.

Product Installation

How do I install the ATS?

1. Mounting

Refer to the enclosure outline drawing. Mount the ATS according to details and instructions shown on this diagram. Mount the ATS vertically to a rigid supporting structure. Level all mounting points by using flat washers behind the holes to avoid distortion of the enclosure.

⚠ CAUTION

MALFUNCTION or SHORTENED LIFE
Protect the ATS from construction grit and metal chips to prevent malfunction or shortened life.

Transfer switches rated 260 and 400 amperes are mounted on an insulator backing piece (installed behind the transfer switch). If the transfer switch is removed from the enclosure and then reinstalled, this insulator must be placed behind the transfer switch. See Figure 1.

⚠ WARNING

FLASH HAZARD- DAMAGE
Be sure that the insulator piece is installed behind the 260 and 400 ampere transfer switches.

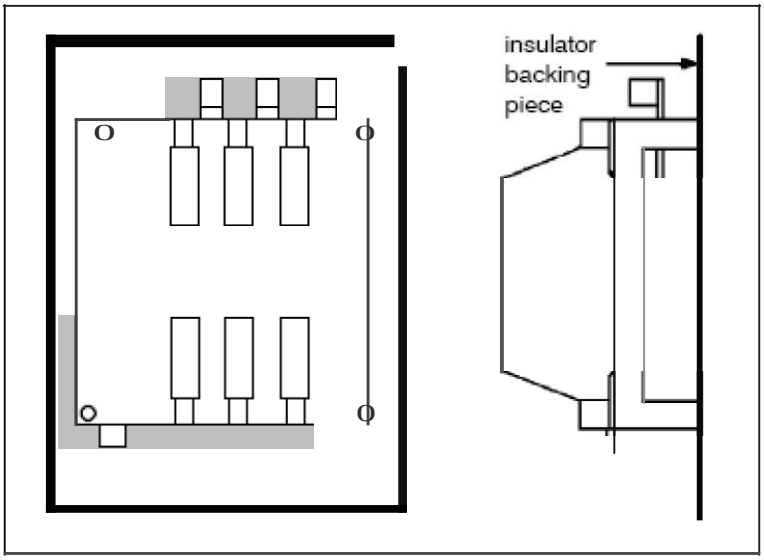


Figure 1. Insulator for 260 and 400 A.

Where is the ground bus located?

1. Upon opening the enclosure door of the transfer switch, the ground bus / lugs are located on the right side of the enclosure.

Caution: Do not open the enclosure door

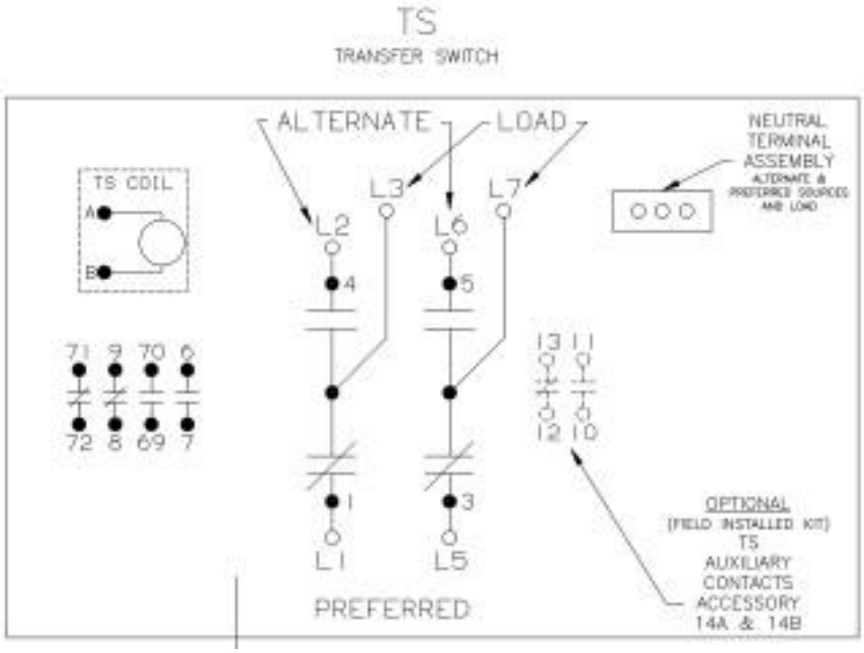
Where do I connect the power cables?

2 – Electrical Power Connections

Refer to the wiring diagram. The ATS must be protected by suitably sized circuit breakers feeding the utility and generator source terminals. The rating of the circuit breakers must be based on the requirements of the National Electrical Code for its nameplate ampere and short circuit withstand ratings.

⚠ DANGER

ELECTROCUTION HAZARD Turn off utility power and turn off the generator to prevent electrocution when wiring the transfer switch.



Others

Parts Inquiry

1. For parts inquiries, note the BOM number, Serial number. and Catalog number of the product and call 1-800-800-2726 (ASCO) option 22. You may also visit: http://store.ascoparts.com/series165parts.html for more information.

Pricing Inquiry

1. To get pricing on the product, call 1-800-800-2726 (ASCO) option 31.
2. To check pricing and availability of a part, call 1-800-800-2726 (ASCO) option 2.